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ABSTRACT

One hundred twenty young adult females, half Anglos and half Mexican-Americans, were administered Wechsler Adult Intelligence Scales (WAIS), Wide Range Achievement Test (WRAT), and Bender Gestalt Tests. Half of each ethnic group were classified by the public schools as learning disabled and half were in regular classes. The WAIS Verbal IQ, Performance IQ, Full-Scale IQ; all WAIS subtests; WRAT Reading, Spelling, and Arithmetic subtests; and the Benders were analyzed by a series of two-way analyses of variance, with ethnicity and learning disabilities as the two main effects. Significant differences between Anglo and Mexican-American females were found, with Mexican-Americans scoring significantly lower on Full-Scale and Verbal IQs, all verbal subtests, and all WRAT scores. No differences between the two groups were found for Performance IQ, any of the Performance subtests, or the Benders. These results reflect the abnormally high number of Mexican-Americans labeled as having "learning disabilities," more than twice the number of Anglos. Bilinguality and sociocultural factors are judged to be responsible for these results and a reconsideration of learning disability criteria is suggested. The study is part of a large group of studies conducted in El Paso, Texas, investigating Anglo and Mexican-American ethnicity, bilinguals, learning disabilities, educational practices, and test bias. (Author/NEC)

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Differences Between Anglo and Mexican-American Females Classified as Learning Disabilities

By

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The University of Texas at El Paso

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Differences Between Anglo and Mexican-American Females Classified as Learning Disabilities

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Abstract

One-hundred-twenty young adult females, half Anglos and half Mexican-American, were administered Wechsler Adult Intelligence Scales (WAIS), Wide Range Achievement Tests (WRAT), and Bender Gestalt Tests. Half of each ethnic group were classified by the public schools as learning disabled and half were in regular classes. The WAIS Verbal IQ, Performance IQ, Full-Scale IQ, all WAIS subtests, WRAT Reading, Spelling, and Arithmetic subtests and the Benders were analyzed by a series of two-way analyses of variance, with ethnicity and learning disabilities as the two main effects. Significant differences between Anglo and Mexican-American females were found, with Mexican-Americans scoring significantly lower on Full-Scale and Verbal IQs, all verbal subtests, and all WRAT scores. No differences between the two groups were found for Performance IQ, any of the Performance subtests, or the Benders. These results reflect the abnormally high number of Mexican-Americans labeled "learning disabilities", more than twice the number of Anglos. Bilinguality and socio-cultural factors are judged to be responsible for these results and a reconsideration of learning disability criteria are suggested.

Differences Between Anglo and Mexican-American Females Classified as Learning Disabilities

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This study is part of a larger group of studies of ethnicity (specifically, Anglos and Mexican-Americans), bilinguals, learning disabilities, educational practices, and test bias. El Paso, Texas is a city where Hispanics outnumber Anglos and it has become increasingly apparent to those in the field of psychometrics that there are consistent ethnic differences in test performance between Anglos and Mexican-Americans. In an earlier study we demonstrated personality profile differences on the MMPI clinical scales not only between Anglos and Mexican-Americans but between two groups of Mexican-Americans, depending on whether they took the test in English or Spanish, with obvious bilingual implications. Working in the field of psychometrics, we have evaluated large numbers of individual's classified by the schools as "learning disabilities." The classification "learning disability" is, itself, a strange and unusual phenomenon. There are no references to learning disabilities prior to 1965 (Meyers and Hammill, 1982, p. 1)--before that the terms minimal brain injury, minimal brain dysfunction, perceptual motor handicaps, etc., were used to describe a collection of disorders that became known as learning disabilities. The evolution of the term learning disabilities has been confused and torturous but probably would not have been more than a tempest in a teapot had it not been for the passage of Public Law 94-142 (the Education

of All Handicapped Children Act of 1975.) With the passage of this law, public schools were not only mandated to provide special education for the learning disabled but received special additional funding for each child so classified. The implications are obvious. As a result, the schools adopted very simple, perhaps one one might call them loose, definitions of learning disabilities. The individual must have a normal IQ--that is, Full Scale IQ of at least 85 or higher and have deficient academic achievement--one standard deviation of 15 scaled-score points lower on a standardized achievement test.

How many learning disabilities are there? Estimates vary from a conservative 1-3% by Kirk and Gallagher (1979, p. 294) to as high as 20-30% estimated by Bryant and McLoughlin (1972). More than 30% of all Hispanic students enrolled in the El Paso Public Schools are classified as learning disabilities, more than twice the number of Anglos. In a previous study (Whitworth, 1983) we compared young adult Anglo and Hispanic males, both classified as learning disabled with non-learning disabled controls. The results revealed significant ethnic differences suggesting linguistic and/or socio-cultural differences rather than learning dysfunction, as the major factors in their being so classified.

The present study compares Anglos and Mexican-American learning disabilities using a female population. The literature is consistent in reporting a much lower incidence of learning disabilities among females as opposed to males by a ratio estimated from 5-1 to as high as 8-1. As the population from which our sample was to be drawn was presumably much smaller than

the male, it was at first questionable whether we could find enough subjects to provide a reasonably large sample size. We need not have been concerned--there were very large numbers of Mexican-American and Anglo females classified by the public schools as learning disabilities. One final aspect of this and the other learning disabled study that is unusual, if not unique, is that they were done on young adults, 16-24 years of age. The literature abounds with studies of children classified as learning disabilities but only one other study, O'Donnell et al. (1983), looks at adult learning disabilities.

Method

Subjects

One-hundred-twenty female high school students, 60 Mexican-American and 60 Anglo-Americans, between the ages of 16 and 24, were administered the Wechsler Adult Intelligence Scale (WAIS), the Wide Range Achievement Test (WRAT), and the Bender Visual Motor Gestalt Test. Half of each ethnic group had been classified by the public schools as learning disabilities and were in special education classes while the other half were enrolled in regular classes and were included as controls.

Design and Procedure

The WAIS Verbal IQ, Performance IQ, Full Scale IQ, the 11 WAIS subtests, the WRAT Reading, Spelling, Arithmetic, and Overall Average scores, along with the Bender Koppitz error scores were analyzed by a series of 2 x 2 analyses of variance. The two main effects, ethnicity (Anglo vs. Mexican-American) and learning disabled vs. non-learning disabled, along with the

second-order interactions (ethnicity X learning disabilities) were computed for all variables.

Results

Table 1 presents the means and standard deviations for all

Insert Table 1 about here

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subjects for all variables. Looking at these data, it is obvious that there are patterns of differences, not only the expected differences between learning disabilities and non-learning disabilities but between ethnic groups as well.

Table 2 presents data comparing all learning disabled

Insert Table 2 about here

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and non-learning disabled females, collapsing over ethnicity. We see very much the same pattern, with Full-Scale and Verbal IQs, along with the other Verbal subtest scores, all significantly different at either the .01 or .05 levels of significance. All WRAT academic achievement test scores were were also significant which is not surprising inasmuch as this is the basis for classification as learning disabilities. No differences in Performance IQ nor any of the Performance subtests were found. It is of some interest and importance to note that no differences were found for the Bender Gestalt, a crude but generally effective perceptual-motor screening device, between

the learning disabilities and the non-learning disabilities groups.

Looking now at Table 3, Mexican-American and Anglo females are compared, this time collapsing over the learning disabled

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Insert Table 3 about here

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dimension, the results are very nearly the same. Full-scale IQ, Verbal IQ, all Verbal subtests except Similarities, and WRAT Reading, Spelling, and Average scores were all statistically significant at either the .01 or.05 levels. As before, neither Performance IQ nor any of the Performance subtests show significant differences.

None of the second-order interactions between ethnicity and learning disablilities were significant for any of the dependent variables. This, again, is not too surprising in view of the consistently robust effects for the two primary variables and the lack of Performance IQ differences.

Looking at these results in more detail, Table 4 presents the means and levels of significance for a series of one-way analyses of variance, comparing just Anglo and Mexican-American females classified by the schools as learning disabilities, with

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Insert Table 4 about here

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ethnicity as the relevant variable. These results are again very similar to those in the initial analysis, with Verbal IQ, five of

the six Verbal subtests, and WRAT Reading all significantly different. None of the Performance items, Spelling, Arithmetic, or Bender revealed any differences, demonstrating that the differences between the two ethnic learning disabilities groups are the result of verbal or language factors.

Finally, the effects of ethnicity on the performance of non-learning disabled controls can be seen in Table 5, presenting the means and levels of significance for a series of one-way ANOVAs for the Anglo and Hispanic non-learning disabled females. Differences here are even more dramatic than for the learning disabilities groups, with both Verbal and Full Scale IQs, all Verbal subtests, and all WRAT scores being significantly different. None of the Performance subtests nor the Bender

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Insert Table 5 about here

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results showed any significance, again demonstrating that the differences were all in the verbal areas.

Discussion

These data reveal consistent significant differences between Anglo and Mexican-American females on objective measures of academic and verbal intellectual ability, replicating our previous results for Anglo and Mexican-American males classified as learning disabilities (Whitworth, 1983). The fact that no such differences were found in either the Performance areas or the Bender suggests that these differences are primarily language based. This, in turn, would lead one to suspect that the effects

of bilinguality are at least partially the basis for the Mexican-American females' deficiencies, leading to their more frequent classification as learning disabilities. If these results are accepted as even somewhat representative, there is every reason to believe that a significant number of Mexican-American students are classified by the public schools as learning disabilities when, in fact, they are simply socio-culturally deprived and/or linguistically deficient in English as a result of bilinguality. This is further supported by the total lack of difference on the Bender scores, even between learning disabled and non-learning disabilities groups. In addition, other research we are conducting reveals that when complete neuropsychological evaluations are performed on students classified as learning disabled, far fewer Mexican-Americans than Anglos show evidence of any organic, neurological involvement. This, in turn, suggests that the greater number (and percentages) of Mexican-American males and females classified as learning disabilities are the result of other factors than "true" organic learning disabilities.

In view of these results and conclusions, we would argue that before any student, Anglo or Mexican-American, male or female, is classified as learning disabled, other evidence, such as neurological or neuropsychological evaluations, be obtained. If the student does not exhibit some type of neuropsychological deficits, some attempts to define (with a view to remediation) whether the student's difficulty is bilingualism, motivation, emotional factors, or some other problem. To label a student

"learning disabled", warehouse him or her in a Special Education Resource Room until the student is old enough, or disenchanted enough, to drop out of school, does a disservice to the student, the educational system, and the public.

References

Bryant, N.D. and McLoughlin (1972). Subject variables: Definitions, incidence, characteristics, and correlates. In N.D.Bryant and C.E.Kass, (Eds.), Final Report. Volume I. USOE Contract, Dept. of Special Education, University of Arizona.

Kirk, S.A. and Gallagher, J.J. (1979). Educating exceptional children. Boston:Houghton-Mifflin.

Myers, P.I. and Hammill, D.D. (1982). Learning disabilities: basic concepts, assessment practices, and instructional practices. Austin:Pro-Ed.

O'Donnell, J.P., Kurtz, J. and Ramanaiah, N.V. (1983). Neuropsychological test findings for normal, learning disabled, and brain-damaged young adults. Journal of Consulting and Clinical Psychology, 51, 726-729.

Whitworth, R.H. (1983). Differences between Anglo- and Mexican-American students classified as learning disabilities. (Report No. EC 160 402). Educational Resource Information Center, (ERIC Document Reproduction Service No. ED 234 535).

Table 1

Means and Standard Deviations for Wechsler IQ Scales, Wide Range Achievement Tests, and Bender Gestalt Tests for 120 Anglo and Mexican-American Females Classified as Learning Disabled or non-Learning Disabled

	Learning Disabled				Non-Learning Disabled				
	Anglos		Mex.-Amer.		Anglos		Mex.-Amer.		Level
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Signif.
Full Scale IQ	95.9	7.2	93.7	6.3	105.7	9.9	100.7	9.6	**
Verbal IQ	90.5	8.8	85.1	5.1	105.6	11.4	98.2	10.5	**
Performance IQ	104.1	9.2	104.9	7.9	105.4	9.9	104.1	9.2	-
Information	6.6	2.1	5.2	0.9	9.2	3.1	8.2	2.6	**
Comprehension	8.8	2.8	7.9	1.9	11.6	2.7	10.2	2.8	**
Arithmetic	6.7	1.6	6.1	1.0	9.9	2.1	8.3	1.9	**
Similarities	9.8	2.2	8.8	1.9	9.7	2.2	10.8	1.8	*
Digit Span	7.9	2.2	7.5	1.8	11.8	2.9	9.8	2.7	**
Vocabulary	8.1	2.0	6.4	1.3	11.8	2.8	9.9	2.9	**
Digit Symbol	10.2	2.4	10.5	2.3	9.6	2.7	10.1	2.5	-
Picture Compl.	10.6	2.1	10.0	1.7	10.7	1.7	10.1	1.7	-
Block Design	10.2	1.7	10.4	2.2	9.9	1.7	10.4	1.6	-
Picture Arrg.	10.3	1.5	10.2	1.5	10.8	1.7	10.5	1.8	-
Object Assmbly	11.0	2.5	11.7	2.2	10.3	1.9	10.9	2.3	-
WRAT Reading	74.4	9.0	70.3	8.9	109.1	9.9	99.9	12.9	**
WRAT Spelling	72.8	**+01	72.6	5.6	104.0	20.1	97.2	12.5	**
WRAT Arithmeti	78.7	7.9	77.6	6.2	94.9	15.5	91.8	9.2	**
WRAT-Average	75.2	6.0	73.6	4.3	102.7	11.0	96.0	10.0	**
Bender Gestalt	1.7	1.5	1.2	1.2	1.6	0.8	0.9	0.9	-

*=p>.05
**=p>.01

Table 2

Means, Standard Deviations, and Significance Levels for Wechsler Scales, Wide Range Achievement, and Bender Tests Comparing 120 Anglo and Mexican-American Females Classified Learning Disabled or Non-Learning Disabled

	Learning Disab. (Anglos + Mex.Amer.)		Non-Learning Disab. (Anglos + Mex.Amer.)		Signif. Level
	Mean	Std.Dev.	Mean	Std.Dev.	
Full Scale IQ	94.8	6.8	103.2	9.8	**
Verbal IQ	87.8	7.0	101.9	10.9	**
Performance IQ	104.2	8.6	104.8	9.6	-
Information	5.9	1.5	8.7	2.8	**
Comprehension	8.4	2.4	10.9	2.8	**
Arithmetic	6.4	1.3	9.1	2.0	**
Similarities	9.3	2.0	10.3	2.0	*
Digit Span	7.7	2.0	10.8	2.8	**
Vocabulary	7.2	1.6	10.8	2.8	**
Digit Symbol	10.4	2.4	9.9	2.6	-
Picture Compl.	10.3	1.9	10.4	1.7	-
Block Design	10.3	2.0	10.2	1.6	-
Picture Arrgment.	10.3	1.5	10.7	1.8	-
Object Assembly	11.4	2.4	10.6	2.1	-
WRAT Reading	72.4	9.0	104.5	11.4	**
WRAT Spelling	72.6	9.3	100.6	16.3	**
WRAT Arithmetic	78.2	7.0	93.3	12.4	**
WRAT-Average	74.4	5.2	99.3	10.5	**
Bender Gestalt	8.6	1.4	9.3	0.8	*

*=p<.05
**=p<.01

Table 3

Means, Standard Deviations, and Significance Levels for Wechsler Scales, Wide Range Achievement, and Bender Tests Comparing 20 Anglo to Mexican-American Females, Combining Learning Disabled with Non-Learning Disabled

	Anglos (LD+nonLD) Mean	Std.Dev.	Mex.-Am. (LD+nonLD) Mean	Std.Dev.	Signif. Level
Full Scale IQ	100.8	8.6	97.2	8.0	*
Verbal IQ	98.0	10.1	91.7	7.8	**
Performance IQ	104.7	9.6	104.2	8.5	-
Information	7.9	2.6	6.7	1.8	**
Comprehension	10.2	2.8	9.1	2.4	*
Arithmetic	8.3	1.8	7.2	1.4	**
Similarities	9.8	2.2	9.8	1.8	-
Digit Span	9.9	2.6	8.6	2.2	**
Vocabulary	10.0	2.4	8.1	2.1	**
Digit Symbol	9.9	2.6	10.3	2.4	-
Picture Compl.	10.6	1.9	10.1	1.7	-
Block Design	10.0	1.7	10.4	1.9	-
Picture Arrgment.	10.6	1.6	10.4	1.6	-
Object Assembly	10.7	2.2	11.3	2.2	-
WRAT Reading	91.8	9.4	85.1	10.9	**
WRAT Spelling	88.4	16.5	84.9	9.0	*
WRAT Arithmetic	86.6	11.7	84.7	8.7	-
WRAT-Average	89.0	8.5	84.8	7.1	**
Bender Gestalt	8.9	1.2	9.0	1.1	-

*=p<.05
**=p<.01

Table 4

Means and Levels of Significance Comparing Anglo and Mexican-American Females Classified as Learning Disabled on WAIS, WRAT and Bender Gestalt Tests.

	Learning Disabled		
	Anglos Mean	Mex.-Am. Mean	Signif. Level
Full Scale IQ	95.90	93.70	-
Verbal IQ	90.50	85.10	**
Performance IQ	104.10	104.80	-
Information	6.60	5.20	**
Comprehension	8.80	7.90	**
Arithmetic	6.70	6.10	*
Similarities	9.80	8.80	*
Digit Span	7.90	7.50	-
Vocabulary	8.10	6.40	**
Digit Symbol	10.20	10.50	-
Picture Compl.	10.60	10.00	-
Block Design	10.30	10.40	-
Picture Arrgment.	10.30	10.20	-
Object Assembly	11.00	11.70	-
WRAT Reading	74.40	70.30	*
WRAT Spelling	72.80	72.60	-
WRAT Arithmetic	78.70	77.60	-
WRAT-Average	75.20	73.60	-
Bender Gestalt	1.60	1.70	-

*=p<.05
**=p<.01

Table 5

Means and Levels of Significance Comparing All Anglo and Hispanic Females Classified as Learning Disabled on WAIS, WRAT, and Bender Gestalt Tests.

	Non-Learning Disabled		
	Anglos Mean	Mex.-Am. Mean	Signif. Level
Full Scale IQ	105.7	100.7	*
Verbal IQ	105.6	98.2	**
Performance IQ	105.4	104.1	-
Information	9.2	8.2	*
Comprehension	11.6	10.2	**
Arithmetic	9.9	8.3	**
Similarities	10.8	9.7	*
Digit Span	11.8	9.8	**
Vocabulary	11.5	9.9	**
Digit Symbol	9.6	10.1	-
Picture Compl.	10.7	10.1	-
Block Design	9.9	10.4	-
Picture Arrgment.	10.8	10.5	-
Object Assembly	10.3	10.9	-
WRAT Reading	109.1	100.2	**
WRAT Spelling	104.0	97.2	**
WRAT Arithmetic	94.9	91.8	*
WRAT-Average	102.7	96.0	**
Bender Gestalt	9.4	9.1	-

*=p<.05
**=<p.01